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APPLICATION NO.: MS158300.2/MSFTP154USA

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re patent application of

Applicant: **Andrew Blake, et al.**  
Serial No.: **10/721,541**  
Filed: **November 25, 2003**  
For: **System and Method Providing Subpixel-Edge-Offset-Based Determination of Opacity**  
Art Unit: **2624**  
Examiner: **Unknown**

**INFORMATION DISCLOSURE STATEMENT**

Assistant Commissioner for Patents  
Alexandria, Virginia 22313-1450

Sir:

1. Pursuant to 37 C.F.R. 1.97 and 1.98, and in compliance with 37 C.F.R. 1.56, the Office's attention is directed to the patents, publications and other information listed on the attached PTO-1449. A copy of each listed document is enclosed except for: (a) pending applications or (b) those previously cited or submitted to the Office in the following application(s) upon which this application relies for an earlier filing date under 35 U.S.C. 120; or (c) U.S. Patent(s) and published applications(s) since the subject application was filed after June 30, 2003.

Serial No.: 09/748,562  
Filing Date: 12/22/2000

Regarding any document, publication or other information for which a date is not given on the attached PTO-1449, Applicant(s) believe(s) the same may qualify as "prior" art to this application and should be treated accordingly, although Applicant(s) reserve(s) the right to contest the prior art status of any document, publication or information, should issue arise.

2. Regarding each listed document that is not in the English language, an English-language translation accompanies this Statement as indicated on the attached PTO-1449 or a concise explanation of the relevance of the document is set forth in the following document(s):

- (a) ☐ Copy of each English language version of a search report indicating the degree of relevance found by the foreign office of each document being submitted from the search report.
- (b) ☐ Attachment entitled "Concise Explanation of Relevance of Non-English Language Documents".

3. Pursuant to 37 C.F.R. 1.97(b) this Statement is being filed (one must be checked):

- (a) ☐ Within 3 months of the filing date or date of entry into the National Stage.
- (b) ☒ Before the mailing date of a first Office Action on the merits. If this Statement is not filed before the mailing date of a first Office Action on the merits, the required certification is given below or, in the absence thereof, the Office is authorized to charge the required fee set forth in 37 C.F.R. 1.17(p) to Deposit Account No. 50-1063 for consideration of this Statement.

(c) \_\_\_ After the period set forth in 37 C.F.R. 1.97(b) but before the mailing date of either a final action or a notice of allowance.

(1) \_\_\_ The required certification is given below, or

(2) \_\_\_ Enclosed is a check covering the fee set forth in 37 C.F.R. 1.17(p) for consideration of this Statement, or

(3) \_\_\_ Charge the fee set forth in 37 C.F.R. 1.17(p) to Deposit Account No. 50-1063.

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4. Certification (if applicable)

(a) \_\_\_ The undersigned hereby certifies that each item of information contained in this Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than 3 months prior to the filing of this Statement.

(b) \_\_\_ The undersigned hereby certifies that no item of information contained in this Statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to the undersigned's knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. 1.56(c) more than 3 months prior to the filing of this Statement.

5. The Commissioner is hereby authorized to charge any additional fees or credit any overpayment to Deposit Account No. 50-1063.

Respectfully Submitted,

By Jeffrey R. Sadlowski  
Jeffrey R. Sadlowski  
Reg. No. 47,914

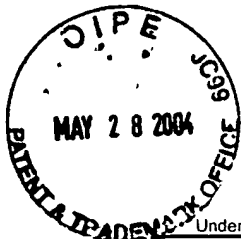
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CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8

I hereby certify that this correspondence (along with any paper referenced as being attached or enclosed) is being deposited on the below date with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to Assistant Commissioner for Patents, Alexandria, Virginia 22313-1450.

Date: 5-25-2004

Jeffrey R. Sadlowski  
Jeffrey R. Sadlowski



PTO/SB/08A (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

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**Complete if Known**

|                        |                        |
|------------------------|------------------------|
| Application Number     | 10/721,541             |
| Filing Date            | November 25, 2003      |
| First Named Inventor   | Andrew Blake           |
| Art Unit               | 2624                   |
| Examiner Name          | Unknown                |
| Attorney Docket Number | MS158300.2/MSFTP154USA |

Sheet 1 of 2

**U. S. PATENT DOCUMENTS**

| Examiner<br>Initials* | Cite<br>No. <sup>1</sup> | Document Number                          | Publication Date<br>MM-DD-YYYY | Name of Patentee or<br>Applicant of Cited Document | Pages, Columns, Lines, Where<br>Relevant Passages or Relevant<br>Figures Appear |
|-----------------------|--------------------------|--|--------------------------------|--|---|
|                       |                          | Number-Kind Code <sup>2</sup> (if known) |                                |  |   |
|                       |                          | US- 6,525,741                            | 02-25-2003                     | Klassen, et al.                                    |   |
|                       |                          | US- 5,630,037                            | 05-13-1997                     | Schindler  |   |
|                       |                          | US- 5,142,592                            | 08-25-1992                     | Moler  |   |
|                       |                          | US- 5,990,903                            | 11-23-1999                     | Donovan  |   |
|                       |                          | US- 5,737,455                            | 04-07-1998                     | Harrington, et al.                                 |   |
|                       |                          | US- 6,384,839                            | 05-07-2002                     | Paul   |   |
|                       |                          | US- 6,134,346                            | 10-17-2000                     | Berman, et al.                                     |   |
|                       |                          | US- 6,377,273                            | 04-23-2002                     | Lee, et al.  |   |
|                       |                          | US- 5,701,365                            | 12-23-1997                     | Harrington, et al.                                 |   |
|                       |                          | US- 6,301,382                            | 10-09-2001                     | Smith, et al.                                      |   |
|                       |                          | US- 6,128,046                            | 10-03-2000                     | Totsuka, et al.                                    |   |
|                       |                          | US- 6,317,525                            | 11-13-2001                     | Aleksic, et al.                                    |   |
|                       |                          | US-                                      |                                |  |   |
|                       |                          | US-                                      |                                |  |   |
|                       |                          | US-                                      |                                |  |   |
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**FOREIGN PATENT DOCUMENTS**

| Examiner<br>Initials* | Cite<br>No. <sup>1</sup> | Foreign Patent Document   | Publication<br>Date<br>MM-DD-YYYY | Name of Patentee or<br>Applicant of Cited Document | Pages, Columns, Lines,<br>Where Relevant Passages<br>Or Relevant Figures Appear | T <sup>6</sup> |
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SignatureDate  
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| Substitute for form 1449/PTO<br><br><b>INFORMATION DISCLOSURE<br/>STATEMENT BY APPLICANT</b><br><br>(Use as many sheets as necessary) |   | <b>Complete if Known</b> |                   |                        |                        |
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|   |   | First Named Inventor     | Andrew Blake      |                        |                        |
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|   |   | Examiner Name            | Unknown           |                        |                        |
| Sheet   | 2 | of                       | 2                 | Attorney Docket Number | MS158300.2/MSFTP154USA |

| NON PATENT LITERATURE DOCUMENTS |                       |   |                |
|---------------------------------|-----------------------|---|----------------|
| Examiner Initials*              | Cite No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | T <sup>2</sup> |
|                                 |                       | S.GHOSAL and R. MEHROTRA. Edge Detection Using Orthogonal Moment-base Operators. 11th IAPR International Conference on Pattern Recognition, pp. 413-416, 1992.  |                |
|                                 |                       | Y. XIAOHAN, J. YLA-JAASKI, and Y. BAOZONG. A New ALgorithm for Texture Segmentation Based on Edge Detection. Pattern Recognition, Vol. 24 No. 11, pp. 1105-1112, 1991.  |                |
|                                 |                       | S.S. IYENGAR and W. DENG. An Efficient Edge Detection Algorithm using Relaxation Labeling Technique. Pattern Recognition, Vol. 28 No. 4, 519-536, 1995.   |                |
|                                 |                       | S. GHOSAL and R. MEHROTRA. Orthogonal Moment Operators for Subpixel Edge Detection. Pattern Recognition, Vol. 26 No. 2, pp. 295-306, 1993.  |                |
|                                 |                       | V. ULTRE and L. MACAIRE. Multispectral Edge Detection by Relaxation Algorithm. Proceedings of the SPIE- The International Society for Optical Engineering, Vol 2666, pp.252-258, 1996.  |                |
|                                 |                       | A.R. SMITH and J.F. BLINN. Blue Screen Matting. Proceedings of SIGGRAPH '96, Computer Graphics Proceedings Annual Conference Series, pp. 259-268. Addison Wesley. Edited by Holly Rushmeier. ISBN 0-201-94800-1.  |                |
|                                 |                       | T. MITSUNAGA, T. YOKOYAMA, and T. TOTSUKA. AutoKey: Human Assisted Key Extraction. Proceedings of SIGGRAPH '95, Computer Graphics Proceedings, Annual Conference Series, pp. 265-272. Addison Wesley. Edited by Robert Cook. ISBN 0-201-84776-0.                |                |
|                                 |                       | G. AVRAHAM and V. PRATT. Sub-Pixel Edge Detection in Character Digitization. Proceedings RIDT II, R. Morris and J. Audre Eds, CUP 1991, Raster Imaging & Digital Typography, pp. 54-64.   |                |
|                                 |                       | E.N. MORTENSEN and W.A. BARRETT. Intelligent Scissors for Image Composition. Computer Graphics Proceedings, Annual Conference Series, pp.191-198, 1995.   |                |
|                                 |                       | K. TOYAMA. Contours for Cutting, Tracking, and Rotoscoping. Vision Technology Group: Machine Learning & Perception. 74 pages.   |                |

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<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

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